



## FINANCIAL DEVELOPMENT AND ECONOMIC DEVELOPMENT IN NIGERIA (1981-2016)

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### **Abstract**

*This research examined the nexus between financial policy and economic growth in Nigeria. The study employed credit to private sector, lending rate, market capitalization and money supply as proxy*

### **Keywords**

*Economic growth, Financial policy, Financial sector development, Capital market. JEL Classification: G32, 023*

### **INTRODUCTION**

The economy of every nation is dependent on her ability to manage her resources. When there is a rise in the capacity of an economy to create employment, goods and services, comparing one period of time to another, it is assumed that economic growth is taking place and this can be measured in nominal terms, which comprise inflation, or in real terms, which are adjusted for inflation. In essence, economic growth can be used to equate one country's economic growth to another, through measurement such as GDP (Gross Domestic Product). A further study of the relationship between

*to measure financial relationship with function effectively; policy, while GDP was economic growth. considering the fact used to capture These findings that the public sector economic growth, therefore imply that a drives the Nigerian using annual data from relationship exists economy as it stands 1981 to 2016. All the between financial now. However for variables were policy and economic capital market stationary at first growth, indicating that development, difference using the a growth in the investors' protection Augmented Dickey financial sector will policies should be Fuller (ADF) and cause same in the enhanced in order to Phillip Perron (PP) economy. Finally, the strengthen and tests. The Johansen study recommends improve public Cointegration test that the government confidence in the result showed that a formulate policies that capital market, such as long-run relationship will enhance credit to reducing charges for between financial the private sector, such the purchase and sale policy and economic as not operating the of securities and growth existed. The Treasury Single reduction of listing research shows that Account (TSA) Policy requirements for new out of the four proxies in a holistic manner, so companies on the for financial policy, that banks will have exchange. three exhibited fund to propel their significant credit delivery*

financial sector development and economic growth will espouse if these economic concepts complement each other and if financial development stimulates growth.

Firms in the same industry face similar institutional environments or have similar firm characteristics, such as production technologies and investment opportunities. The inability to perfectly measure or observe these determinants generates a role for industry financial policy, in so far as it proxies for these factors. In essence, the correlation between firms' leverage ratios and that of their peers reflects an omitted variables or measurement error bias. Again, when a firms' financial policies are at least

partly driven by a response to their peers. This response can operate through two distinct channels.

The first channel is via actions, in which firms respond to their peers' financial policies. The second channel is via characteristics, in which firms respond to changes in the characteristics of their peer's profitability, risk, investment opportunities, etc. Because of the reflection problem, an instrument for peer firm financial policy is needed to disentangle these explanations.

### **Economic Development**

Economic development refers to economic growth accompanied by changes in output distribution and economic structure. These changes may include an improvement in the material well-being of the poorer half of the population; a decline in agriculture's share of GNP and a corresponding increase in the GNP share of industry and services; an increase in the education and skills of the labour force; and substantial technical advances originating within the country. A major goal of poor countries is economic development or economic growth. The two terms are not identical. Growth may be necessary but not sufficient for development.

Economic development is a multivariate concept that has no definite definition. It is a transformation process where low income national economies are transformed into modern industrial economies with emphasis on qualitative and quantitative improvements. Political and social transformations are also included in the concept of economic development in addition to economic changes. Mundlak (2000). It also includes improvements in material welfare especially for persons with the lowest incomes, the eradication of mass poverty with its correlates of illiteracy, disease and early death, changes in the composition of inputs and output that generally include shifts in the underlying structure of production away from agricultural towards industrial activities, the organization of the economy in such a way that productive employment is general among working age population rather than the situation of a privileged minority, and the correspondingly greater participation of

broad based groups in making decision about the direction, economic and otherwise, in which they should move their welfare". Economic development does not pay emphasis on population rather it is "an increase in the absolute size of annual production.

Economic growth refers to increases in a country's production or income per capita. Production is usually measured by gross national product (GNP) or gross national income. At the same time, the future of economic development and poverty reduction is far from assured-many people who have come out of poverty remain vulnerable, the natural environment is deteriorating, and national economic growth remains uncertain. Economic development therefore, is a process, not of years, but of many decades. The future of economic development and poverty reduction is far from assured-many people who have come out of poverty remain vulnerable, the natural environment is deteriorating, and national economic growth remains uncertain. Economic development is a process, not of years, but of many decades.

The Nigerian financial sector which has its major players as the Central Bank of Nigeria, money deposit banks, capital markets, discount houses, insurance companies, Asset Management Companies and pension houses, plays a vital role in economic growth and development as it channels resources from area of surplus to those of deficit in the economy with its liquidity role as most significant. In recent years, the sector has witnessed major reforms and policies to enhance its performance, notably the deregulation of the banking system. Conventional wisdom holds that there is an interaction between financial policy and economic development which implies that there is a vibrant financial sector that can lead to a growth of the Nigerian economy. At the same time, whether or not financial policy precedes economic development or economic development precedes financial policy, is still a debatable topic for both developed and developing countries.

Therefore, it is against this condition that major economies of the world strive to develop their financial sector so as to achieve sustainable economic development, hence the need for this study.

The purpose of this study therefore is to evaluate the impact of money supply and economic development in Nigeria, examine the relationship between credit to the private sector and economic development in Nigeria; access the impact of interest rate on economic development in Nigeria and to also examine the relationship between market capitalisation and economic development.

In the process of finding a reasonable solution to this problem, answers to the following questions were sought. There are:

- a. To what extent has money supply impacted on economic development in Nigeria?
- b. Is there a significant relationship between credit to the private supply and economic development in Nigeria?
- c. Is there any long-run relationship between lending rate and economic development in Nigeria?
- d. To what extent has Nigerian financial policy impacted on market capitalisation on economic development in Nigeria?

Furthermore, the following hypotheses are proposed:

H<sub>01</sub>: There is no significant relationship between money supply (M2) and economic development in Nigeria.

H<sub>02</sub>: There is a significant relationship between credit to the private sector and economic development in Nigeria.

H<sub>03</sub>: There is no significant relationship between lending rate and economic development in Nigeria

H<sub>04</sub>: There is no significant relationship between market capitalization and economic development in Nigeria.

## **LITERATURE REVIEW**

The relationship between financial policy and economic development has been the subject of much debate both at theoretical and empirical levels. Financial systems have long been recognised for their important role in economic growth and development. Earlier economic growth theories argued that economic growth is a process of innovations whereby the

interactions of innovations in both financial and real sectors provide a driving force for dynamic economic development and growth. According to Levine (1997), in order for economic growth to take place, it is necessary to increase labour productivity, followed by the size of the workforce and improved technology. In other words, economic development requires an increase in all aspects of growth.

Exploring the importance of finance for economic development, its inherent risks, and its socio-economic costs of banking crises, one can emphatically say that the financial sector is often the propeller of the policy agenda of every economy. However, the importance of access to credit as entry barrier into the real sector and the relative ease with which owners and creditors of financial institutions can be expropriated also makes financial sector policies an important tool in the political process.

### **Baseline theories of Economic Development and Growth**

The primary objective of every nation is to improve her economy. Raising the well-being and socioeconomic capabilities of peoples everywhere is easily the most crucial social task facing us today. Every year, aid is disbursed, investments are undertaken, policies are framed, and elaborate plans hatched to achieve this goal, or at least to get closer to it. How do we identify and track

It is, of course, tempting to suggest that the state of material well-being of a nation is captured quite accurately by its per capita gross national income (GNI): the per person value of income earned by the people of a country over a given year. (Or one might invoke its close cousin, gross domestic product, GDP, which restricts itself to domestically produced income, and ignores net income received from other countries, such as dividends, interest or repatriated profits). As Aghion, Howitt and Meyer-Foulkes (2005) opined that since economic development at the national level was adopted as a conscious goal, there have been long phases during which development performance was judged exclusively by the yardstick of per capita income growth.

Economic Development is the expansion of capacities that contribute to the advancement of society through the realization of individual, firm and community potential. Economic Development is measured by a sustained increase in prosperity and quality of life through innovation, lowered transaction costs, and the utilization of capabilities towards the responsible production and diffusion of goods and services. Economic Development requires effective institutions grounded in norms of openness, tolerance for risk, appreciation for diversity, and confidence in the realization of mutual gain for the public and the private sector. Economic Development is essential to creating the conditions for economic growth and ensuring our economic future.

Economic development requires increasing the capabilities of economic agents so that they can realize their full potential to participate in economic and social life. A modern view of economic development requires creating the preconditions that support creativity, collaborative problem solving and information sharing, and lowering the costs of engaging in innovation. Economic development have been studied from stagnation to growth; poverty traps; econometrics of economic development; cross-country growth patterns; the world income distribution; scale effects; measuring quality change and externalities; growth accounting; historical perspectives on national development, technology and institutions; general purpose technologies; trade specialisation and development; the effects of inequality on growth; inequality and development; political regimes, institutions, property rights and development; financial markets and growth, urban development, and human capital; demography and growth; policy and development; the effects of technical change on wage inequality; growth and the size of nations; development and the environment; social consequences of economic development; social capital; and two essays on reflections on development theory.

Although there is a lack of joining theory, there are a number of partial theories that discuss the role of various factors in determining economic development and what can ultimately increase economic development. Pagano (1993) also suggests three ways in which the development of the

financial sector might affect economic development under the basic endogenous growth model. First, it can increase the productivity of investments. Secondly, an efficient financial sector reduces transaction costs and thus increases the share of savings channeled into productive investments. An efficient financial sector improves the liquidity of investments. Lastly, financial sector development can either promote or decrease savings.

The growth of an economy is not only thought of as an increase in a productive capacity but also as an improvement in the quality of life to the people of that economy. The endogenous growth theory suggested that financial intermediation has a positive effect on steady-state growth but the government intervention in the financial system has a negative effect on economic growth (Adamopoulos, 2010).

Economic growth can be defined as an increase in real GDP, which is GDP adjusted for inflation. Also, several scholars have carried out studies on the relationship between financial sector development and economic development in many developed and emerging economies. (Goldsmith 1969, Vazakidis and Adamopoulos 2009, Godfrey 2013, Nkoro and Uko 2013, Dandume 2014, Chisunga 2015, Kiprop, Kalio, Kibet & Kiprop 2015, etc). It can be referred to as the rise in the value of all the production in a particular economy. Thus, it is the yearly increase in the country's GDP or GNP, in percentage terms. It alludes to considerable rise in per-capita national product, over a period, i.e. the growth rate of increase in total output, must be greater than the population growth rate.

Economic growth is a complex problem because several factors contribute to the growth process. In the economic literature, several factors drive economic growth. These include the investment ratio as it the Harrod-Domar model; (Pagano, 1993); (Jayaraman & Choong, 2007); (Kagochi, 2013), human capital (Ram, 1999), research development and trade openness (Mckinnon, 1973; Ahmad & Malik, 2009; Schumpeter, 1934). It is a quantitative measure that shows the increase in the number of commercial transactions in an economy. Its determinants include: human



resources, natural resources, capital formation, technological development and political and social factors.

### **The Concept of Financial Policy**

Financial policies are of utmost importance in every economy because financial markets are distinct from other sectors. A loan or an insurance contract is not a contemporaneous trade, but a payment made by one party in lieu of an actual or contingent return in the future. Information is very paramount to the functioning of financial markets. Savers need information on the viability and practices of financial intermediaries; intermediaries need information on the health and motivations of entities they lend to; and borrowers need information on the options they have when seeking credit.

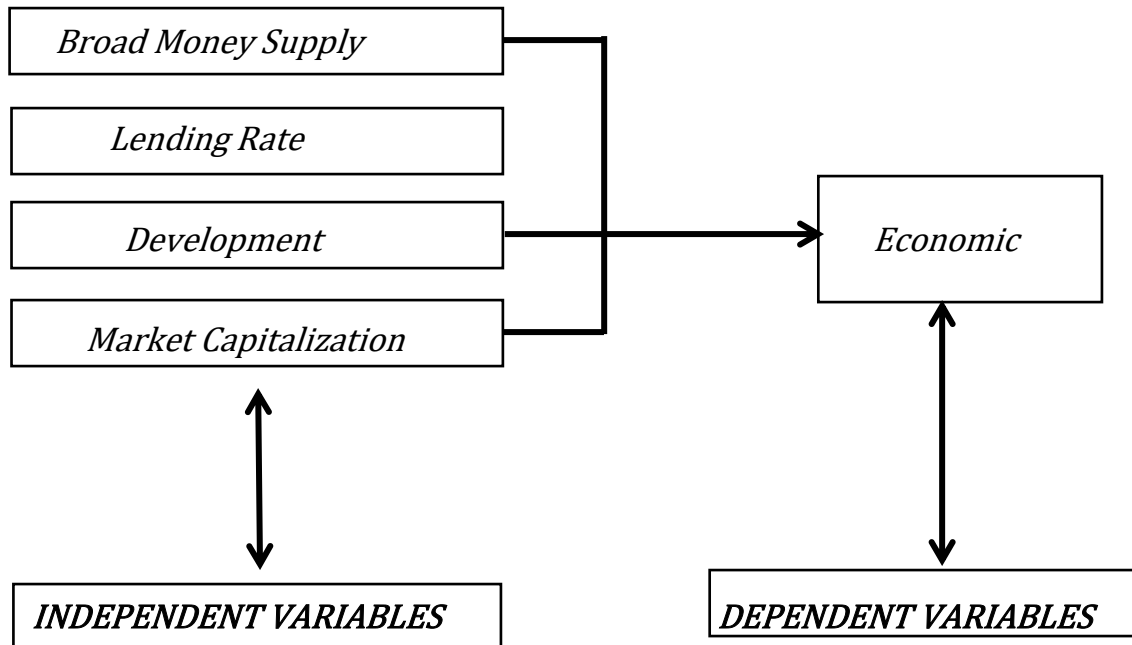
Failure of financial markets is becoming very common mostly in developing economies. This mostly are because of the public goods characteristics of information which agents must acquire and process (Stiglitz, 1991; Chandrasekhar and Sujit (2005)) and poor management of public fund. Well-articulated information can be used by all simultaneously, and it is difficult to completely prevent others from accessing that information without paying a price. Individual shareholders tend to refrain from investing money and time in acquiring information about managements, hoping that others would do so instead and knowing that all shareholders, including themselves, benefit from the information garnered. When there is information asymmetric there may be inadequate investment and poor monitoring, leading to risky decisions and malpractice.

Financial firms wanting to reduce or avoid monitoring costs may just follow other, possibly larger, financial firms in making their investments, leading to what has been observed as the “herd instinct” characteristic of financial players. This not merely limits access to finance for some agents, but could lead to over-lending to some entities whose failure could have systemic effects. The prevalence of informational externalities aggravates some of these problems. Malpractice in a particular bank leading to failure may trigger fears among depositors in other banks, resulting in a run on deposits there. Thanks to Nigerian Deposit Insurance Corporation (NDIC) for taking the insurance policy of all Nigerian banks through the directives of the Central Bank of Nigeria.

**Conceptual framework**

Figure 1: Measurement of variables

*Credit to the Private Sector*



*Authors' concept 2018*

**METHODOLOGY**

This study performs a time series analysis, as to examine the nexus between financial policy and economic development in Nigeria using secondary data. The study covers a period of thirty-four years (1981 – 2016) using the ex-post factor research design. Ex-post factor design uses historical information in studying existing phenomenon, with the intent of using the result to understand the current trend as regard the issue of study.

**Method of Data Collection**

The data collected include five variables as measures of financial policy such as broad money supply, stock market capitalisation, credit to the private sector and lending rate. Lastly, GDP was used as a proxy for economic development.

### Method of data analysis

This study adopts the co-integration technique while the VECM (Vector Error Correction Method) methodology was used to analyze the data. The Augmented Dickey Fuller (ADF) and Philips Perron (PP) unit root test was used to access the stationarity and order of integration. The Johansen co-integration technique was employed to check for the existence of a long-run equilibrium relationship among the variables, since it has the advantages amongst others for allowing for more than one co-integration equation. While the error correction model will allow us access the various magnitudes. Finally, all statistical estimation was done using E-Views 10+ software.

### Model Specification

A general notation of a VECM can be thus specified as;

#### Equation 1

$$\Delta y_t = \mu + AB^t x_{t-1} + \sum_{i=1}^{p-1} \tau_i \Delta x_{t-i} + \varepsilon_t$$

Where  $\mu$  represents a deterministic shift vector.  $\tau_i$  are  $(k \times k)$  parameter matrices of the lagged stationary differences,  $B$  being the  $(k \times r)$  matrix of the  $k$ -dimensional cointegrating vectors and  $A$  the corresponding  $(k \times r)$  matrix of the error correction coefficients. Nevertheless, the matrix  $\Pi = AB'$  represents the long-run relationship between the variables in  $y_t$ .

Where  $y_t$  is a vector of five variables (GDP, M2, CPS, LR and MKTCAP) Given our variables of interest in equation (2) above, the VECM representation are thus specified below;

#### Equation 2

$$\begin{aligned} \Delta GDP_t = & \mu_1 + \alpha_1(c_1 + c_2t + c_3M2_{t-1} + c_4CPS_{t-1} + c_5LR_{t-1} \\ & + c_6MKTCAP_{t-1}) + \beta_{11}\Delta GDP_{t-1} + \beta_{12}\Delta M2_{t-1} \\ & + \beta_{13}\Delta CPS_{t-1} + \beta_{14}\Delta LR_{t-1} + \varepsilon_t^y \end{aligned}$$

### DATA PRESENTATION

Table 1

| YEAR | GDP     | CPS   | LR    | MKTCAP | M2    |
|------|---------|-------|-------|--------|-------|
| 1981 | 15258   | 8.57  | 7.75  | 5      | 14.47 |
| 1982 | 14985.1 | 10.67 | 10.25 | 5      | 15.79 |
| 1983 | 13849.7 | 11.67 | 10    | 5.7    | 17.69 |

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|      |         |         |       |         |          |
|------|---------|---------|-------|---------|----------|
| 1984 | 13779.3 | 12.46   | 12.5  | 5.5     | 20.11    |
| 1985 | 14953.9 | 13.07   | 9.25  | 6.6     | 22.3     |
| 1986 | 15238   | 15.25   | 10.5  | 6.8     | 23.81    |
| 1987 | 15263.9 | 21.08   | 17.5  | 8.2     | 27.57    |
| 1988 | 16215.4 | 27.33   | 16.5  | 10      | 38.36    |
| 1989 | 17294.7 | 30.4    | 26.8  | 12.8    | 45.9     |
| 1990 | 19305.6 | 33.55   | 25.5  | 16.3    | 52.86    |
| 1991 | 19199.1 | 41.35   | 20.01 | 23.1    | 75.4     |
| 1992 | 19620.2 | 58.12   | 29.8  | 31.2    | 111.11   |
| 1993 | 19928   | 127.12  | 18.32 | 47.5    | 165.34   |
| 1994 | 19979.1 | 143.42  | 21    | 66.3    | 230.29   |
| 1995 | 20353.2 | 180     | 20.18 | 180.4   | 289.09   |
| 1996 | 21177.9 | 238.6   | 19.74 | 285.8   | 345.85   |
| 1997 | 21789.1 | 316.21  | 13.54 | 281.9   | 413.28   |
| 1998 | 22332.9 | 351.96  | 18.29 | 262.6   | 488.15   |
| 1999 | 22449.4 | 431.17  | 21.32 | 300     | 628.95   |
| 2000 | 23688.3 | 530.37  | 17.98 | 472.3   | 878.46   |
| 2001 | 25267.5 | 764.96  | 18.29 | 662.5   | 1269.32  |
| 2002 | 28957.7 | 930.49  | 24.85 | 764.9   | 1505.96  |
| 2003 | 31709.5 | 1096.54 | 20.71 | 1359.3  | 1952.92  |
| 2004 | 35020.6 | 1421.66 | 19.18 | 2112.5  | 2131.82  |
| 2005 | 37475   | 1838.39 | 17.95 | 2900.1  | 2637.91  |
| 2006 | 39995.5 | 2290.62 | 17.26 | 5120.9  | 3797.91  |
| 2007 | 42922.4 | 3680.09 | 16.94 | 13181.7 | 5127.4   |
| 2008 | 46012.5 | 6941.38 | 15.14 | 9563    | 8008.2   |
| 2009 | 49856.1 | 9147.42 | 18.99 | 7030.8  | 9411.11  |
| 2010 | 54612.3 | 10157   | 17.59 | 9918.2  | 11034.94 |
| 2011 | 57511   | 10660.1 | 16.02 | 10275.3 | 12172.49 |
| 2012 | 59929.9 | 14649.3 | 16.79 | 14800.9 | 13895.39 |
| 2013 | 63218.7 | 15751.8 | 16.72 | 19077.4 | 15160.29 |
| 2014 | 67152.8 | 17129.7 | 16.55 | 16875.1 | 17679.29 |
| 2015 | 69023.9 | 18675.5 | 16.85 | 17003.4 | 18901.3  |
| 2016 | 67931.2 | 21082.7 | 16.87 | 16185.7 | 21607.68 |

*Source: CBN Statistical Bulletin, 2017*

**Descriptive data analysis**

Table 2

|                     | <b>GDP</b> | <b>MKTCAP</b> | <b>LR</b> | <b>M2</b> |
|---------------------|------------|---------------|-----------|-----------|
| <b>Mean</b>         | 31757.15   | 4135.131      | 17.59528  | 4172.186  |
| <b>Median</b>       | 22391.14   | 292.2         | 17.5450   | 558.5500  |
| <b>Maximum</b>      | 69023.93   | 19077.4       | 29.8000   | 21607.68  |
| <b>Minimum</b>      | 13779.26   | 5.0           | 7.7500    | 14.4700   |
| <b>Std. Dev.</b>    | 18151.71   | 6243.731      | 4.757283  | 6363.748  |
| <b>Skewness</b>     | 0.874864   | 1.240455      | 0.186892  | 1.450980  |
| <b>Kurtosis</b>     | 2.318378   | 2.968282      | 3.475984  | 3.742182  |
| <b>Jarque-Bera</b>  | 17.521211  | 16.02644      | 0.549413  | 13.45832  |
| <b>Probability</b>  | 0.0255598  | 0.000986      | 0.759795  | 0.001196  |
| <b>Sum</b>          | 1143257    | 148864.7      | 633.43    | 150198.7  |
| <b>Sum Sq. Dev.</b> | 1.15E+10   | 1.36E+09      | 792.1111  | 1.42E+09  |
| <b>Observations</b> | 36         | 36            | 36        | 36        |

*Source: Author's Computation Using Eviews 10+*

From table 2, the descriptive statistics shows that the GDP in Nigeria for the study period has a mean value of 31,757.15 with the yearly rates fluctuating between a maximum of 69,023.93 and a minimum of 13,779.26. The skewness with a value of 0.874864 indicates that the distribution is positively skewed. While the kurtosis value of 2.318378 shows that the distribution is platykurtic.

Market Capitalization (MKTCAP) for the period has a mean value of 4135.131 and a standard deviation of 6243.731 suggesting that the series is heavily dispersed from its mean. The maximum and minimum values of the series were 19077.4 and 5.0 respectively. While the distribution is positively skewed and leptokurtic with values of 1.240455 and 2.968282 respectively.

Lending rate (LR) has a mean value of 17.59528 and a standard deviation of 4.757283 suggesting the series is slightly dispersed from its mean. With values fluctuating between a maximum of 29.8000 and a minimum of

7.7500. While the kurtosis and skewness value of 3.475984 and 0.186892 suggests that the distribution is leptokurtic and positively skewed. Money Supply (M2) has a mean value of 4172.186 and a standard deviation of 6363.748 indicating the series is highly dispersed from its mean. The maximum and minimum values of the series were 21607.68 and 14.4700 respectively. While the distribution is positively skewed and leptokurtic with values of 1.450980 and 3.742182 respectively.

### Diagnostic tests

Before estimating the Johansen co-integration and VECM test, the following diagnostic tests were conducted to make sure that the estimated results are reliable, namely: Unit root, Serial Correlation, Heteroskedasticity, Normality and Spurious Regression.

### Unit Root

Stationarity implies that the mean, variance and covariance are constant across different periods. This study tested for the stationarity of all variables used by applying two different unit root test namely; the Augmented Dickey Fuller and Phillips-Perron Test. According to table 3 below, all variables attained stationarity after first differencing; thereby indicating that all variables were integrated of order 1, i.e. I(1).

Table 3: Unit Root Test Results

| Variables | ADF Test    | Remarks | PP Test     | Remarks |
|-----------|-------------|---------|-------------|---------|
| GDP       | -3.229346** | 1(1)    | -3.044705** | 1(1)    |
| CPS       | -4.252003*  | 1(1)    | -4.135167*  | 1(1)    |
| M2        | -4.625662*  | 1(1)    | -4.721255*  | 1(1)    |
| MKTCAP    | -4.375528*  | 1(1)    | -4.400562*  | 1(1)    |
| INT       | -7.652311*  | 1(1)    | -7.515512*  | 1(1)    |

*Critical Values of ADF Test:*

1% level = -3.639407

5% level = -2.951125

10% level = -2.614300

*Critical Values of PP Test:*

1% level = -3.639407

5% level = -2.951125

10% level = -2.614300

*\*/\*\*/\*\*\*, indicates significance at 1%, 5% & 10% respectively.*

*Test includes Trend and Intercept*

*Source: Authors' Computation Using Eviews 10+*

### **Serial Correlation**

When observations have a natural sequential order, serial correlation is said to have occurred. Table 4 below shows that the LM-Statistics at lag 1 with p-value of 0.4352 indicates the absence of serial correlation in the model since the p-values are greater than the critical value at 5% level of significance. Thus, we can conclude that there is no presence of serial correlation in the model.

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**Table 4. VEC Residual Serial Correlation LM Tests**

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**Null Hypothesis: no serial correlation at lag order h**

**Sample: 1981 2016**

**Included observations: 35**

| <b>Lags</b> | <b>LM-Stat</b>  | <b>Prob</b>   |
|-------------|-----------------|---------------|
| <b>1</b>    | <b>36.72298</b> | <b>0.4352</b> |

*Source: Author's Computation Using Eviews 10+*

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### **Heteroskedasticity**

Heteroskedasticity occurs whenever the variance of the unobserved error term  $u$ , changes across different segments of the population over time. Table 5, below indicates that the VAR Residual Heteroskedasticity test with a chi-square value of 394.7885 and a p-value of 0.2657 confirms the absence of Heteroskedasticity in the model since its p-values are greater than the critical values at 5% level of significance.

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**Table 5. VEC Residual Heteroskedasticity Tests: No Cross Terms (only levels and squares)**

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**Sample: 1981 2016**

**Included observations: 35**

**Joint test:**

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| Chi-sq  | Df  | Prob.  |
|---------|-----|--------|
| 394.788 | 378 | 0.2657 |
| 5       |     |        |

**Source: Author's Computation Using Eviews 10+**

### Normality

Normality test is a statistical process used to determine if a sample or any group of data fits a standard normal distribution. The result of the Jarque-Bera normality test (66.09429) with a joint probability value of 0.0000 at significance level of 1% indicates that the model residuals are not normally distributed. However, as per central limit theorem if the number of observations is greater than 30, the issue of normality can be ignored.

**Table 6. VEC Residual Normality Tests**

**Orthogonalization: Cholesky (Lutkepohl)**

**Null Hypothesis: residuals are multivariate normal**

**Sample: 1981- 2016**

**Included observations: 35**

| Component | Jarque-Bera | Df | Prob.  |
|-----------|-------------|----|--------|
| 1         | 1.297145    | 2  | 0.5228 |
| 2         | 15.72761    | 2  | 0.2654 |
| 3         | 29.17806    | 2  | 0.0000 |
| 4         | 1.227643    | 2  | 0.5413 |
| 5         | 18.26356    | 2  | 0.0001 |
| Joint     | 66.09429    | 12 | 0.0000 |

**Source: Authors' Computation Using Eviews 10+**

### Spurious Regression

As a rule of thumb, if the  $R^2$

> Durbin-Watson statistics, spurious regression is said to have occurred in the model. From table 10 below, the results confirmed the absence of spurious regression, since the value of  $R^2$  (0.760998) is less than DW statistics of 2.308250.



### Johansen Co-integration Test

Since all variables are stationary and integrated of the same order, i.e. I(1). The next step is to check if a long-run relationship exists among the variables. A co-integration test was performed using the Johansen co-integration technique to check for the existence of a long-run relationship. From Table 7, the Trace statistic and Max-eigenvalue reveals 3 ranks in the trace and max-eigenvalues criteria respectively, thereby leading us to reject the null hypothesis of no co-integration equation among the variable at 5 per cent. The econometric results therefore indicate that a long-run relationship exists between financial sector development and economic growth. The implication of these findings is that financial sector development and economic growth are co-integrated, that is they move together in the long run. This result allows for the estimation of the VECM (Vector Error Correction Model).

Table 7: Johansen Co-integration Test Results

| Hypothesized<br>No. of CE(s) | Eigenvalue | Trace<br>Statistic | 0.05<br>Critical Value | Prob.** | Max-Eigen<br>Statistic | 0.05<br>Critical Value | Prob.** |
|------------------------------|------------|--------------------|------------------------|---------|------------------------|------------------------|---------|
| None *                       | 0.961590   | 265.3450           | 95.75366               | 0.0000  | 110.8204               | 40.07757               | 0.0000  |
| At most 1 *                  | 0.939691   | 154.5245           | 69.81889               | 0.0     | 95.48116               | 33.87687               | 0.0000  |
| At most 2 *                  | 0.595646   | 59.04335           | 47.85613               | 0.0032  | 30.78578               | 27.58434               | 0.0187  |
| At most 3                    | 0.410184   | 28.25757           | 29.79707               | 0.0744  | 17.95009               | 21.13162               | 0.1317  |
| At most 4                    | 0.174733   | 10.30747           | 15.49471               | 0.2578  | 6.529630               | 14.26460               | 0.5462  |
| At most 5                    | 0.105162   | 3.777845           | 3.841466               | 0.0519  | 3.777845               | 3.841466               | 0.0519  |

**Source:** Authors' Computation Using Eviews 10+.

### Vector Error Correction Model

Given the fact that the variables in the equation are cointegrated, the next step is the estimation of the short-run dynamics within a vector error correction model (VECM) in order to capture the speed of adjustment to

equilibrium in the case of any shock to any of the independent variables. The error-correction term shows the adjustments of the model from short-run disequilibrium to long-run equilibrium trends. From Table 8, the over parameterized error correction model ( $ECT_{t-1}$ ) is well specified and is of the expected negative sign and significant with GDP. The coefficient of the error correction term indicates that about 43.41% of the disequilibrium in the long run is offset by the short-run adjustment within a year. This implies a low speed of adjustment. Furthermore, the VEC model indicates that the value of lending rate (LR) has a negative and insignificant impact on GDP, suggesting that an increase in LR by NI will reduce GDP by 0.10% holding the influence of other variables constant. Also, there is a positive and significant relationship between broad money supply (M2) and GDP, indicating that a rise in M2 by NI will lead to an increase in GDP by 36.56%. Similarly, a positive and significant relationship exist between credit to the private sector (CPS) and GDP; but wiping out the influence of other regressors on GDP, will cause GDP to rise by 75.05% when CPS is increased by NI. Likewise, a significant and positive relationship was observed between market capitalization (MKT CAP) and GDP, therefore an increase in MKT CAP by NI holding other explanatory variables constant will make GDP rise by 16.21%. The adjusted  $R^2$  of 0.686212 shows a fairly good fit, indicating that about 68.62% of variations in the dependent variable (GDP) are explained by the cumulative effects of the explanatory variables. While the standard error of 0.382218 signifies that about 38.22% of the variation in the dependent variable will not be explained by the explanatory variables. The F statistics of 7.426645 indicates that the model significant at 1% level and is a good fit.

Table 8: Overparametised VECM Results  
 Dependent Variable: GDP

|                    | Coefficient | Std. Error            | t-Statistic | Prob.    |
|--------------------|-------------|-----------------------|-------------|----------|
| GDP(-1)            | 7.623104    | 0.543210              | 14.03343    | 0.0000   |
| M2(-1)             | 0.365657    | 0.162844              | 2.245445    | 0.0325   |
| LR(-1)             | -0.001093   | 0.001105              | -0.989674   | 0.3404   |
| MKTCAP(-1)         | 0.162155    | 0.077582              | 2.090101    | 0.0568   |
| CPS(-1)            | 0.750551    | 0.256189              | 2.929679    | 0.0073   |
| C                  | 1168.365    | 498.1356              | 2.345476    | 0.0276   |
| ECT(-1)            | -0.434123   | 0.077562              | -5.597109   | 0.0005   |
| R-squared          | 0.726321    | Mean dependent var    |             | 1557.240 |
| Adjusted R-squared | 0.686212    | S.D. dependent var    |             | 1532.667 |
| S.E. of regression | 0.382218    | Akaike info criterion |             | 16.63450 |
| Sum squared resid  | 18527236    | Schwarz criterion     |             | 17.08343 |
| Log likelihood     | 172.6566    | Hannan-Quinn criter.  |             | 16.78760 |
| F-statistic        | 7.426645    | Durbin-Watson stat    |             | 2.412150 |
| Prob(F-statistic)  | 0.000014    |                       |             |          |

*Source: Authors' Computation Using Eviews 10+.*

### Test of Hypotheses

The hypotheses were tested using the p-values from the VECM result. The study adopted 10% level of significance.

***H<sub>01</sub>: There is no significant relationship between money supply (M2) and economic development in Nigeria.***

According to the result of this study; money supply (M2) has a positive and significant effect on economic development with a p-value of 0.0325 which is significant at 5% level. Hence, we reject the null hypothesis.

***H<sub>02</sub>: There is a significant relationship between credit to the private sector and economic development in Nigeria.***

Based on the findings of this study, credit to the private sector is positive and significant with economic development, with a p-value of 0.0073 which is significant at 1% level. Hence, we reject the null hypothesis.

***H<sub>03</sub>: There is no significant relationship between lending rate and economic development in Nigeria.***

From table 8 above, an insignificant and negative relationship was observed between lending rate and economic development, with a p-value of 0.3404, which exceeds the 10% threshold. Hence we accept the null hypothesis.

***H<sub>04</sub>: There is no significant relationship between market capitalisation and economic development in Nigeria.***

The result of this study revealed that, market capitalisation has a positive and significant effect on economic development with a p-value of 0.0568 which is significant at 5% level, therefore, we reject the null hypothesis.

### CONCLUSION AND RECOMMENDATIONS.

#### Conclusion

The major objective of the research was to assess the impact of financial policy on economic development in Nigeria using time series data from 1981-2016 sourced from the CBN statistical bulletin, 2016. The study employed money supply, credit to the private sector, lending rate; and market capitalisation as proxies for financial sector policy, using the VECM (Vector Error Correction Model) technique in modeling the relationship between financial policy and economic development. This research's objective had been achieved since three out of four variables applied showed significant relationship with economic development.

This research examined the impact of financial policy on economic development in Nigeria. Results from the findings shows that a positive and significant relationship exists between market capitalization, broad money supply and credit to the private sector with economic growth, while a negative and insignificant relationship was observed between lending rate and economic growth in Nigeria. The outcome provides evidence that financial sector policy plays a crucial role in economic development in Nigeria.

### **Recommendations**

Based on the findings that growth in market capitalization, broad money supply and credit to the private sector influences economic development, we therefore recommend that to fully realize the growth potentials of the economy, it is therefore imperative to remove all obstacles that could hinder the growth of capital market development and banking sector. While government formulate policies that will enhance credit to the private sector, such as not operating the Treasury Single Account (TSA) Policy in a holistic manner, so that banks will have fund to propel their credit delivery function effectively; considering the fact that the public sector drives the Nigerian economy as it stands now. Again, having banks whose aim will focus on enhancing development in the real sector of the economy is an imperative. In terms of capital market development, we also recommend that investor's protection policies should be revisited in other to strengthen and improve public confidence in the capital market, such as reducing charges for the purchase and sale of securities, reduction of listing requirements for new companies on the exchange and establishment of an

effective legal framework which will enhance speedy and satisfactory resolve of investment related dispute, thereby creating confidence among participants in the market, while attracting other potential investors.

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